

What is claimed is:

- Sub 1. A wall having a front surface and a rear surface, the wall comprising:
5 comprising plurality of blocks;

each block having an upper surface spaced apart from a substantially
parallel lower surface, thereby defining a block thickness;

up & bottom
surface.

opposed and substantially parallel first and second faces, the first face
having an area greater than the second face;

front &
rear faces

- 10 opposed and non-parallel side surfaces, the first and second faces
together with the upper, lower and side surfaces forming a block body;

side faces.

the lower surface having first and second channels substantially parallel
to the first and second faces; and

15 the blocks being positioned in the courses such that the front surface of
the wall is formed from the first faces of a portion of the multiple wall blocks
and the second faces of others of the multiple wall blocks.

2. The wall of claim 1 wherein the lower surface of the block further
comprises a third channel substantially parallel to the first and second faces

- 20 3. The wall of claim 1 wherein each block has the same thickness.

4. The wall of claim 1 wherein one of the first and second channels is
adapted to receive a horizontal reinforcement member.

- 25 5. The wall of claim 1 further wherein the width of the blocks is defined by
the first face of the blocks and wherein the blocks comprise blocks of three
different block widths

6. The wall of claim 1 wherein the wall further comprises horizontal reinforcing members adapted to fit within one of the first and second channels of the blocks.

5. *in powder concrete*
7. The wall of claim 1 wherein each of blocks further comprises at least one core extending the thickness of the blocks.

8. The wall of claim 6 wherein the wall further comprises vertically aligned blocks in the first lower course and the second upper course and vertical reinforcing members adapted to fit through the cores of vertically aligned blocks.

9. The wall of claim 1 wherein the upper surface of each block has pin receiving apertures substantially perpendicular to the upper and lower surfaces of the blocks.

10. The wall of claim 1 wherein the blocks further comprise at least one pin receiving aperture, and the wall further comprises pins, each pin having a head portion and a body portion, the head portion being configured to be received within one of the at least two channels of the lower surface of the block in the second upper course of the wall and the body portion being configured to be received in the pin receiving aperture of the block in the first lower course of the wall.

11. The wall of claim 1 wherein the first face and the second face are textured in a manner resulting in the appearance of natural stone.

12. The wall of claim 11 wherein at least one side surface is textured in a manner resulting in the appearance of natural stone.

13. A wall block for use in forming a wall from multiple wall blocks, the wall having a front surface and a rear surface, the block comprising:

an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness;

opposed and substantially parallel first and second faces, the first face having an area greater than the second face;

opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body;

the lower surface having first and second channels substantially parallel to the first and second faces; and

wherein the block body is configured for construction of a wall having a front surface of the wall formed of the first faces of a portion of the multiple wall blocks and the second faces of others of the multiple wall blocks.

14. A method of constructing a wall, the wall having a front surface and a rear surface, the method comprising:

providing a plurality of blocks, each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; the lower surface having first and second channels substantially parallel to the first and second faces; and

placing the blocks in a first lower course and a second upper course such that the front surface of the wall is formed from the first faces of a portion of the multiple wall blocks and the second faces of others of the multiple wall blocks.

15. A wall system for constructing a reinforced retaining wall having at least a first lower course of blocks and a second upper course of blocks, the wall system comprising:

a plurality of blocks, each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; the lower surface having first and second channels substantially parallel to the first and second faces; the upper surface of the blocks having at least one pin receiving aperture;

a pin sized to be contained within the pin receiving aperture of a block to extend above the upper surface of the block a predetermined distance;

a geogrid; and

a geogrid connector, the blocks being configured such that they are capable of being positioned when constructing the wall so that the first channel of the lower surface of a block in the upper course receives a pin extending from the upper surface of a block of the lower course and the second channel of the lower surface of the block in the upper course receives the geogrid connector such that the geogrid is secured within the second channel by the geogrid connector.

16. A wall having a front surface and a rear surface, the wall comprising:

at least a first lower course and a second upper course, the upper and lower courses comprising a plurality of first and second blocks;

each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness;

each block having opposed and substantially parallel first and second faces, thereby defining a block length, the first face having an area greater than the area of the second face;

the first blocks each having first and second converging side surfaces, the lower surface of the first blocks having at least two channels that open onto the first and second side surfaces, each channel parallel to the first and second faces;

5 the second blocks each having opposed and non-parallel side surfaces, a first side surface being substantially perpendicular to the first face and a second side surface being substantially non-perpendicular to the first face, the lower surface of the second blocks each having at least two channels that open onto only the second side surface, each channel parallel to the first and second faces;

10 the blocks being positioned in the courses such that the front surface of the wall is comprised of the first faces of a plurality of the first and second blocks and the second faces of a plurality of the first and second blocks.

15 17. The wall of claim 16 further comprising a straight section and a corner section, wherein the straight section comprises a plurality of the first blocks, and the corner section comprises a plurality of the second blocks, oriented in such a manner to form a 90 degree angle.

20 18. The wall of claim 16 wherein, for the first blocks and the second blocks, the at least two channels is three channels.

25 19. The wall of claim 16 wherein one of the at least two channels is adapted to receive a horizontal reinforcement member.

30 20. The wall of claim 16 further wherein the width of the blocks is defined by the first face of the blocks and wherein the first blocks comprise blocks of three different block widths.

21. The wall of claim 16 further wherein the width of the blocks is defined by the first face of the blocks and wherein the second blocks comprise blocks of three different block widths.

5 22. The wall of claim 16 wherein the wall further comprises horizontal reinforcing members adapted to fit within one of the at least two channels of the first and second blocks.

10 23. The wall of claim 16 wherein each of the plurality of the first and the second blocks further comprises at least one core extending the thickness of the first and the second blocks.

15 24. The wall of claim 23 wherein the wall further comprises vertically aligned blocks in the first lower course and the second upper course and vertical reinforcing members adapted to fit through the cores of vertically aligned blocks.

20 25. The wall of claim 16 wherein the upper surface of each block of the plurality of first and second blocks has pin receiving apertures substantially perpendicular to the upper and lower surfaces of the blocks.

25 26. The wall of claim 16 wherein the first blocks and the second blocks further comprise at least one pin receiving aperture, and the wall further comprises pins, each pin having a head portion and a body portion, the head portion being configured to be received within one of the at least two channels of the lower surface of the block in the second upper course of the wall and the body portion being configured to be received in the pin receiving aperture of the block in the first lower course of the wall.

30 27. The wall of claim 16 wherein the first face and the second face are textured in a manner resulting in the appearance of natural stone.

28. The wall of claim 27 wherein at least one side surface is textured in a manner resulting in the appearance of natural stone.

5 29. A method of constructing a wall, the wall having a front surface and a rear surface, the method comprising:

providing a plurality of blocks, each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; each block having opposed and substantially parallel first and second faces, thereby defining a block length, the first face having an area greater than the area of the second face; the first blocks each having first and second converging side surfaces, the width of the blocks defined by the first face, the lower surface of the first blocks having at least two channels that open onto the first and second side surfaces, each channel parallel to the first and second faces; the first and second blocks each having opposed and non-parallel side surfaces, thereby defining a block width, one of the side surfaces being substantially perpendicular to the first face, the lower surface of the second blocks each having at least two channels that open onto only one side surface, each channel parallel to the first and second faces;

10 15 20 placing the blocks in at least a first lower course and a second upper course such that the front surface of the wall is comprised of the first faces of the plurality of the first and second blocks and the second faces of a plurality of the first and second blocks.

25 30. The method of claim 29 wherein each block has at least one pin receiving aperture extending through the block thickness substantially perpendicular to the upper and lower surfaces, further comprising:

30 placing a pin having a head portion and a body portion into the pin receiving aperture such that the body portion is in the pin receiving aperture of the block in the first lower course and the head portion is configured to be

received in one of the at least two channels of the block in the second upper course.

31. The method of claim 29 wherein the step of providing the plurality of blocks includes providing blocks having an attachment system allowing the blocks in the first lower course to be attached to the blocks in the second upper course.

32. The method of claim 29 further comprising placing a geogrid between the first lower course and the second upper course.

33. A retaining wall having at least a first lower course of blocks and a second upper course of blocks, the wall comprising:

a plurality of blocks, each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; the lower surface having first and second channels substantially parallel to the first and second faces; the upper surface of the blocks having at least one pin receiving aperture;

a pin having a body portion and a head portion, the body portion sized to be contained within the pin receiving aperture of a block and the head portion extending above the upper surface of the block a predetermined distance, such that the head portion is engaged in one of the first and second channels of the lower surface of the block in the second upper course, thus forming an attachment between the courses of blocks.

34. A method for constructing a reinforced retaining wall system having at least a first lower course of blocks and a second upper course of blocks, the method comprising:

providing a plurality of blocks, each block having an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; the lower surface having first and second channels substantially parallel to the first and second faces; the upper surface of the blocks having at least one pin receiving aperture;

placing a pin within the pin receiving aperture of a block, the pin extending above the upper surface of the block a predetermined distance;

providing a geogrid and a geogrid connector; and

positioning the blocks when constructing the wall so that the first channel of the lower surface of a block in the upper course receives a pin extending from the upper surface of a block of the lower course and the second channel of the lower surface of the block in the upper course receives the geogrid connector such that the geogrid is secured within the second channel by the geogrid connector.

35. A wall block for use in forming a wall from a plurality of wall blocks, the wall having at least a first lower course of blocks and a second upper course of blocks, blocks in the upper course being connected to blocks in the lower course by pins extending from a top surface of blocks in the lower course and received by a pin receiving cavity formed in the bottom surface of blocks in the upper course, the wall block comprising:

an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness;

opposed and substantially parallel first and second faces, the first face having an area greater than the second face;

opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body;

the lower surface having first and second channels substantially parallel to the first and second faces; and

the block body being configured such that when a wall is constructed from the blocks, the front surface of the wall is formed of the first faces of a portion of the multiple wall blocks and the second faces of others of the multiple wall blocks, the first channel functioning as the pin receiving cavity when the first face forms a portion of a front surface of the wall and the second channel functioning as the pin receiving cavity when the second face forms a portion of a front surface of the wall.

36. A wall having at least a first lower course of blocks and a second upper course of blocks, the wall comprising:

a plurality of wall blocks, the blocks in the upper course being connected to blocks in the lower course by pins extending from a top surface of blocks in the lower course and received by a pin receiving cavity formed in the bottom surface of blocks in the upper course;

the wall block comprising an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; the lower surface having first and second channels substantially parallel to the first and second faces;

the front surface of the wall being formed of the first faces of a portion of the multiple wall blocks and the second faces of others of the multiple wall blocks, the first channel functioning as the pin receiving cavity when the first face forms a portion of a front surface of the wall and the second channel functioning as the pin receiving cavity when the second face forms a portion of a front surface of the wall.

37. The method of constructing a wall having at least a first lower course of blocks and a second upper course of blocks, comprising:

5 providing a wall block comprising an upper surface spaced apart from a substantially parallel lower surface, thereby defining a block thickness; a pin receiving aperture substantially perpendicular to the upper and lower surfaces; opposed and substantially parallel first and second faces, the first face having an area greater than the second face; opposed and non-parallel side surfaces, the first and second faces together with the upper, lower and side surfaces forming a block body; 10 the lower surface having first and second channels substantially parallel to the first and second faces;

placing a pin in the pin receiving aperture so that it extends from the top surface of the block in the lower course;

15 connecting blocks in the upper course to blocks in the lower course by the pin received by a pin receiving cavity on the bottom surface of blocks in the upper course, such that the front surface of the wall is formed of the first faces of a portion of the multiple wall blocks and the second faces of others of the multiple wall blocks, the first channel functioning as the pin receiving cavity when the first face forms a portion of a front surface of the wall and the second channel 20 functioning as the pin receiving cavity when the second face forms a portion of a front surface of the wall.